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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------------|---------------------|------------------|
| 10/500,222 | 02/15/2005 | Diego Alejandro Moreno Gomez | 70200-0008 | 7494 |

22902 7590 04/25/2007
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WASHINGTON, DC 20005

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| EXAMINER |
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UPTON, CHRISTOPHER

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| ART UNIT | PAPER NUMBER |
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1724

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/25/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/500,222

Applicant(s)

MORENO GOMEZ ET AL.

Examiner

Christopher Upton

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-10 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hard et al, Francis et al, Revis et al, Chaumont et al, German patent 44 33 413, or the Ashley et al article.

Hard, Francis, Revis, Chaumont, the German patent and the Ashley article each disclose the treatment of radioactive waste water by microorganisms, as claimed. While the references do not disclose the treatment of waste water from spent nuclear fuel pools, it is submitted that the source of the wastewater fails to patentably distinguish over the prior art, as the references disclose the general removal of radioactive metals from waste water regardless of the source. Note also that the Ashley article discloses the treatment of "reprocessing streams" (page 384), which would obviously include spent fuel pools.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alvarez et al.

Alvarez discloses the treatment of radioactive waste water by an immobilized culture on a metal support, including iron alloys such as steel and including the form of beads (balls) (see column 7, lines 31-40), as claimed. While Alvarez does not disclose the

source of waste water being from spent nuclear fuel pools, it is submitted that the source of the wastewater fails to patentably distinguish over the prior art, as the Alvarez discloses the general removal of radioactive metals from a variety of waste water sources, including industrial sources.

4. Claims 5-10 are allowed.

5. Applicant's arguments filed on January 29, 2007 have been fully considered but they are not persuasive.

Applicant argues that the recitation of the source of the waste water being spent nuclear fuel pools is not recited in the references applied. It is submitted that the source of the wastewater fails to patentably distinguish over the references applied, absent a declaration showing unexpected results, as the references disclose the general treatment of nuclear contaminated wastewater from a variety of sources. For example, while Hard specifically discloses mine waste water, other sources such as soil washing plants are disclosed, and the process does not appear to be limited to mine waste. Francis discloses a variety of sources, including a fuel fabrication plant (column 9, line 32-34). Revis discloses waste from nuclear power plants (column 1, lines 25-27), which would obviously include spent pools. Chaumont discloses "numerous industrial processes" (column 1, lines 12-18).

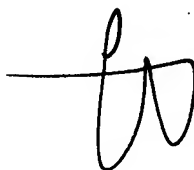
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saunders discloses in-situ biotreatment of various metals, including cobalt and radioactive metals.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Upton whose telephone number is 571-272-1169. The examiner can normally be reached on 7:30-5:00, off every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher Upton
Primary Examiner
Art Unit 1724